



### [3D Bioprinting 2014-2024: Applications, Markets and Players](#)

3D bioprinting constitutes a raft of technologies, commercial and not-yet commercial, which have the potential to significantly impact a number of major markets, including in vitro testing for more efficient drug discovery and toxicity testing of personal consumer products, as well as the clinical fields relating to implant/grafting of human tissue. Though not yet employed within its addressable markets (current bioprinter sales and products are to research and development organisations only), the potential for rapid deployment in some areas already exists, subject to adequate funding being made available.

#### Drug discovery

Drug discovery is a highly expensive process which in most cases will end in failure to gain regulatory clearance (see figure 1). The reason for this high failure rate is related to the lack of sufficiently accurate pre-clinical (prior to human volunteer) testing methodologies which have to date been limited to 2-dimensional human cell assays together with animal testing.

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